

Case Reports

Coin Ingestion Complicating a Tavern Game

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OVER AN 18-MONTH PERIOD, two college students presented to the emergency department at the University of Washington with coins impacted in the esophagus, and one student presented with a coin in the duodenum. All three had been playing a tavern game, "Quarters," which resulted in the coin ingestions. Although well recognized in children,¹⁻⁶ it is unusual for adults to ingest coins. "Quarters" has been briefly mentioned in a review of foreign bodies of the upper gastrointestinal tract¹; yet, it has not been well described nor have cases been reported. Three cases are reported here.

Description of Game

"Quarters" is played with a number of people sitting around a circular table, generally in a tavern. One variation of the game has students drinking as rapidly as possible a glass of beer with a quarter in the bottom and attempting to catch the coin between their teeth. The more alcohol consumed, the more difficult it is to catch the coin. Particularly popular in the Pacific Northwest is a variation that also stresses marksmanship. Contestants bounce coins off the table into opponents' beer glasses. If the coin lands in the glass, the person who is sitting in front of it must drink the

beer without swallowing the coin. Yet another variation has a centrally located glass into which players bounce coins. If the coin lands in the glass, the victor drinks it.

Report of Cases

Case 1

An 18-year-old college student complained of dysphagia after accidentally ingesting a quarter while playing the described game. A chest radiograph showed the coin lodged in the distal esophagus (Figure 1). Uneventful removal of the quarter from an area immediately proximal to the gastroesophageal junction was achieved using a rat-tooth forceps. No complication was noted, and the patient was discharged later that day.

Case 2

A 23-year-old man presented with dysphagia after ingesting a 50-cent piece while playing "Quarters." Radiographs located the coin in the upper esophagus at the thoracic inlet (Figure 2). The coin was retrieved using the rat-tooth forceps.

Case 3

A 22-year-old woman visited the emergency department on the advice of her friends after she ingested a quarter playing the same game. She was asymptomatic. Radiographs located a coin in the duodenal bulb (Figure 3). Although the quarter was not found on monitoring of her stools, abdominal films seven days later indicated that the coin had passed.

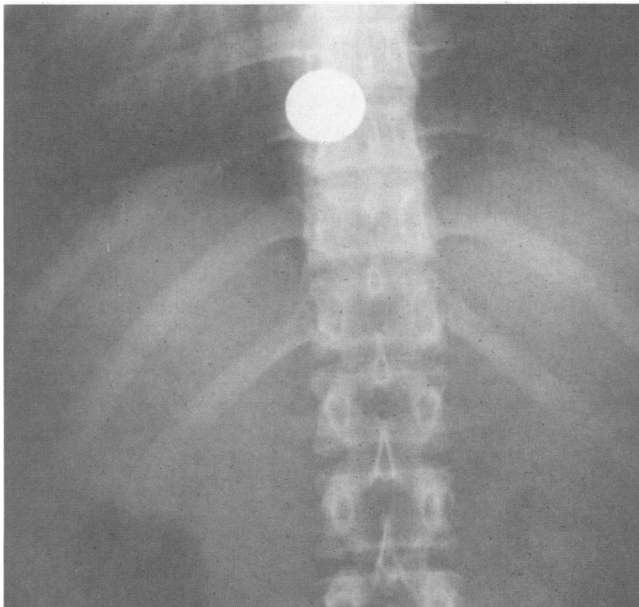


Figure 1.—The radiograph shows a quarter lodged at the gastroesophageal junction in patient 1.

Discussion

Reviews of foreign body ingestions stress that children tend to have impacted coins, buttons, and metallic objects, while adults tend to have impacted meat, bones, and other food substances.¹⁻⁶ Those adults who do swallow metal objects are most frequently prison inmates or psychiatric patients.⁷ The three young adults presented in this report, therefore, represent another risk group.

Giordano and colleagues noted that 50% of impacted foreign bodies in the esophagus of children were at the thoracic inlet, 17% were in the midesophagus, and 29% in the distal esophagus.² The esophageal lumen is externally constricted by the aorta, by the left atrium, and at the diaphragm. Of the cases presented in this report, one patient's coin impacted at the gastroesophageal junction and the other just above the aorta immediately below the thoracic inlet. One patient spontaneously passed the coin through all luminal narrowings, which presumably is what happens with most accidental coin ingestions.

Before the widespread use of flexible endoscopes, rigid instruments were used to remove foreign bodies from the esophagus. Major complications in as many as 9% of patients were reported in one series.⁴ It is generally accepted that flexible instruments are the preferred instruments for retrieving most foreign bodies from the esophagus.¹ The two patients who had coins removed endoscopically tolerated the procedure well and without complication. The rat-tooth forceps provided a solid grip, facilitating removal. The patient who had an impacted 50-cent piece was asked to swallow when the coin and endoscope were at the level of the crico-

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pharyngeus muscle. The voluntary relaxation of the upper esophageal sphincter allowed the large coin to pass with minimal resistance.

According to students and tavern owners, the game "Quarters" generally results in substantial consumption of alcohol. As the players become more inebriated, they discriminate less well between liquid and solid as they rapidly drink a glass of beer. Furthermore, alcohol reduces both upper and lower esophageal resting and yield pressures.^{8,9} When the patients "chug-a-lugged" their beers, a coin could tumble through a poorly responsive pharynx and through a relaxed upper esophageal sphincter to some portion of the esophagus that was sufficiently extrinsically constricted to stop further progression. Alcohol reduces esophageal peristalsis. In the two patients with esophageal impactions, there was no pathologic lesion found to explain the impactions besides the normal anatomic constrictions and the effect of alcohol.

"Quarters" remains a popular game among college students in the Pacific Northwest. The foreign body ingestions are readily treatable either by time or, if impaction is present,

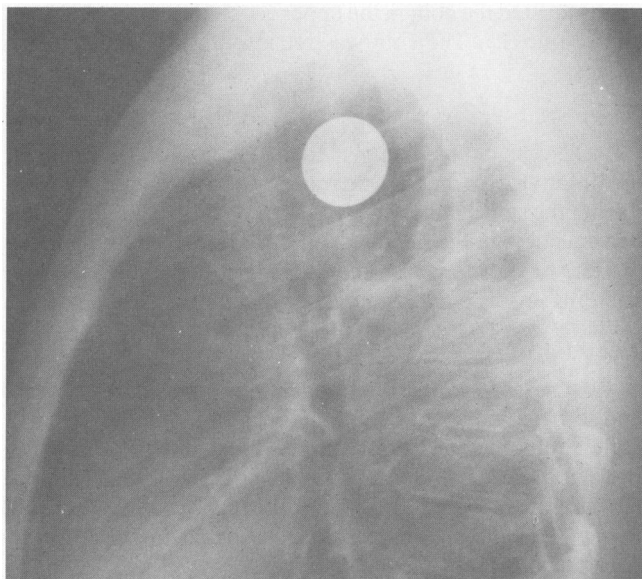


Figure 2.—In patient 2, the ingested 50-cent piece lodged at the thoracic inlet immediately above the aorta.



Figure 3.—A radiograph taken of patient 3 shows a quarter located in the duodenal bulb. The patient was asymptomatic and passed the coin without incident.

by flexible endoscopy. This report alerts physicians to the game and its consequences.

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Bleomycin-Induced Pulmonary Fibrosis in a Patient With Rheumatoid Arthritis

A Possible Synergistic Effect?

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BLEOMYCIN is the chemotherapeutic agent most frequently associated with pulmonary toxicity.¹⁻⁵ Previous or concomitant radiotherapy to the thorax, concomitant chemotherapy, and high inspired oxygen concentrations may enhance the toxicity of bleomycin, producing a toxic reaction at a lower total dose.^{6,7} The effect is dose- and age-related,¹ and life-threatening disease is unusual at total doses of less than 150 units.³

We report the case of a patient with rheumatoid arthritis and stage IIIB Hodgkin's disease in whom pulmonary fibrosis developed after he received 137 units of bleomycin. This unexpected toxicity at a relatively low cumulative dose raises the possibility that the patient's rheumatoid arthritis may have made him more susceptible to bleomycin-induced pulmonary toxicity.

Report of a Case

The patient, a 51-year-old man, was admitted to Pacific Medical Center (Seattle) in April 1987 because of dyspnea and cough for three months. On examination he was afebrile. There was no finger clubbing or palpable lymphadenopathy. A chest examination revealed bilateral bibasilar crackles. He had characteristic changes of rheumatoid arthritis involving

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